Chowan River-Dismal Swamp Basin

The Chowan River and Dismal Swamp Basin is located in the southeastern portion of Virginia and covers 4,061 square miles or approximately 10 percent of the Commonwealth's total area.

The Basin extends eastward from Charlotte County to the Chesapeake Bay. The Chowan River-Dismal Swamp Basin in Virginia is defined by both hydrologic and political boundaries. The basin is bordered by the James River Basin and the Small Coastal River Basins to the east, the Roanoke River Basin to the west and the Virginia/North Carolina State line to the south. The basin is approximately 145 miles in length and varies from 10 to 50 miles in width. The Chowan River-Dismal Swamp Basin flows through the Piedmont and Coastal Plain Physiographic Provinces. The Chowan portion flows 130 miles from east to west, crossing both the Piedmont and Coastal Plain, while the Dismal Swamp lies entirely within the Coastal Plain. The Piedmont portion is characterized by rolling hills, steeper slopes and somewhat more pronounced stream valleys. The Coastal Plain, in contrast, is nearly flat with a descending series of terraces.

The Chowan River-Dismal Swamp Basin is mostly rural with approximately 64 percent of its land covered by forest. Cropland and pasture make up another 28 percent, while only about 6 percent is classified as urban.

The 1994 population for the Chowan River-Dismal Swamp Basin was approximately 586,276. All or portions of the following 14 counties and three cities lie within the basin: Counties - Greensville, Lunenburg, Southampton, Sussex, Brunswick, Charlotte, Dinwiddie, Isle of Wight, Mecklenburg, Nansemond, Nottoway, Prince Edward, and Surry; Cities - Chesapeake, Franklin, Suffolk, and Virginia Beach.

The climate of the Chowan River-Dismal Swamp Basin is moderate due to its proximity to the Atlantic Ocean, its latitude, topography, and prevailing winds. The average annual temperature is 59°F with extremes of 107 and -3°F having been recorded. Average annual precipitation is approximately 47 inches. This varies from 48 inches in Holland in the east, to 42 inches in Blackstone in the west. The average annual snowfall is 11 inches.

Major tributaries of the Chowan River are the Meherrin, the Nottoway and the Blackwater. The Nottoway and the Blackwater join at the Virginia/North Carolina state line to form the Chowan River. The Dismal Swamp portion is mostly flat with many swamp and marshland areas.

The Chowan River-Dismal Swamp Basin is divided into five USGS hydrologic units as follows: HUC 03010201 - Nottoway; HUC 03010202 - Blackwater; HUC 03010203 - Chowan; HUC 03010204 - Meherrin; and HUC 03010205 - Albemarle Sound. The five hydrologic units are further divided into 44 waterbodies or watersheds.

Basin assessment information is presented in Tables 2.6-5-1, 2.6-5-2, 2.6-5-3.

CHOWAN-DISMAL SWAMP BASIN INDIVIDUAL USE SUPPORT SUMMARY TABLE

Total Size Monitored:

Basin Size

Rivers -1,867.66 miles Lakes - 4,558.50 acres Estuaries - 82.90 sq. miles Rivers -4906 miles Lakes - 5,029.30 acres Estuaries -83 sq miles

Use	Water Body Type	Size Fully Supporting	Size Fully Supporting but Threatened	Size Partially Supporting	Size Not Supporting	Total Size Assessed
Aquatic Life	River	1,109.03	352.81	208.08	198.29	1868.21
	Lake	5,029.30	0	0	0	5029.3
	Estuary	0	82.89	0.01	0	82.9
Fish Consumption	River	4,901.68	0	0	0	4901.68
	Lake	5,029.30	0	0	0	5029.3
	Estuary	82.90	0	0	0	82.9
Shellfishing	River	-	-	-	-	0
	Lake	-	-	-	-	0
	Estuary	0	0	0	0	0
Swimming	River	1,518.94	179.77	9.83	0.05	1708.59
	Lake	5,029.30	0	0	0	5029.3
	Estuary	82.78	0	0.12	0	82.9
Drinking Water	River	119.60	0	0	0	119.6
	Lake	587.00	0	0	0	587
	Estuary	0	0	0	0	0

TABLE 2.6-5-2 SIZE OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES IN CHOWAN-DISMAL SWAMP BASIN

Cause of Impairment	Туре	Major Impact	Moderate/ Minor Impact
General Standards (Benthic)	River (mi) Lakes (acres) Estuary (mi ²)	2.70 0 0	0 0 0
Known Toxicity (Ammonia)	River (mi) Lakes (acres) Estuary (mi²)	2.70 0 0	0 0 0
Pesticides	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Priority Organics	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Metals	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
рН	River (mi)	169.87	121.07
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Siltation	River (mi)	3.82	3.15
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Organic Enrichment/Low D.O.	River (mi)	177.28	184.93
	Lakes (acres)	0	0
	Estuary (mi²)	0	0.01
Pathogen Indicators	River (mi)	0.05	9.83
	Lakes (acres)	0	0
	Estuary (mi²)	0	0.12
Dioxins	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi ²)	0	0
Habitat Alterations	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Suspended Solids	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0

TABLE 2.6-5-3 SIZE OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES IN CHOWAN-DISMAL SWAMP BASIN

Source of Impairment	Туре	Major Impact	Moderate/ Minor Impact
Industrial Point Sources	River (mi)	2.70	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Municipal Point Sources	River (mi)	3.82	9.83
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Combined Sewer Overflow	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Agriculture	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0.01
Silviculture	River (mi)	0	3.15
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Construction	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Urban Runoff/Storm Sewers	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Resource Extraction	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Land Disposal	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Natural Sources	River (mi)	194.47	184.93
	Lakes (acres)	0	0
	Estuary (mi²)	0	0.01
Source Unknown	River (mi)	2.05	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
Other/Water Quality Standards	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0
VDH Fish Consumption Advisory	River (mi)	0	0
	Lakes (acres)	0	0
	Estuary (mi²)	0	0

Chowan River Basin Appendix B for 1998 305(b) and 303(d) Reports

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Chowan River Basin Appendix B for 1998 305(b) and 303(d) Reports

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